**Geometry B: Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Secants, Tangent, and Chord Angles WS1**  5/11/15 **Hour \_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***This activity is intended to teach both geometry, and to read and follow instructions.***

1. Use a sheet of paper as a right angle. Slide the corner of the sheet of paper across the circle, until the corner touches the right edge of the circle, and then mark the two points at which the edges of the paper intersect the circle. Connecting those points creates a diameter.
2. Repeat step 1, but hold the paper at a different orientation so the corner touches near the top of the circle, and you get a new diameter. The intersection of the diameter is the center. Label it “C”. Be precise!
3. Draw a tangent from A to the top half of the circle. Label the point of intersection “Q”, and label the tangent Ray AQ.
4. Draw a secant from A through the bottom half of the circle. Label the near and far points of intersection “N” and “F”. Label the secant.
5. Draw the three radii from the center to Q, N, and F. Measure arcs QN and QF, being sure to hold the vertex of the protractor at the center of the circle.

mQN = \_\_\_\_\_\_\_\_\_\_\_ mQF = \_\_\_\_\_\_\_\_\_\_\_

1. Measure the secant tangent angle QAF. mQAF = \_\_\_\_\_\_\_\_\_
2. Confirm that the secant-tangent angle equals one-half the difference between the two intercepted arcs.

½( mQN – mQF) = \_\_\_\_\_\_\_\_

A **∙**

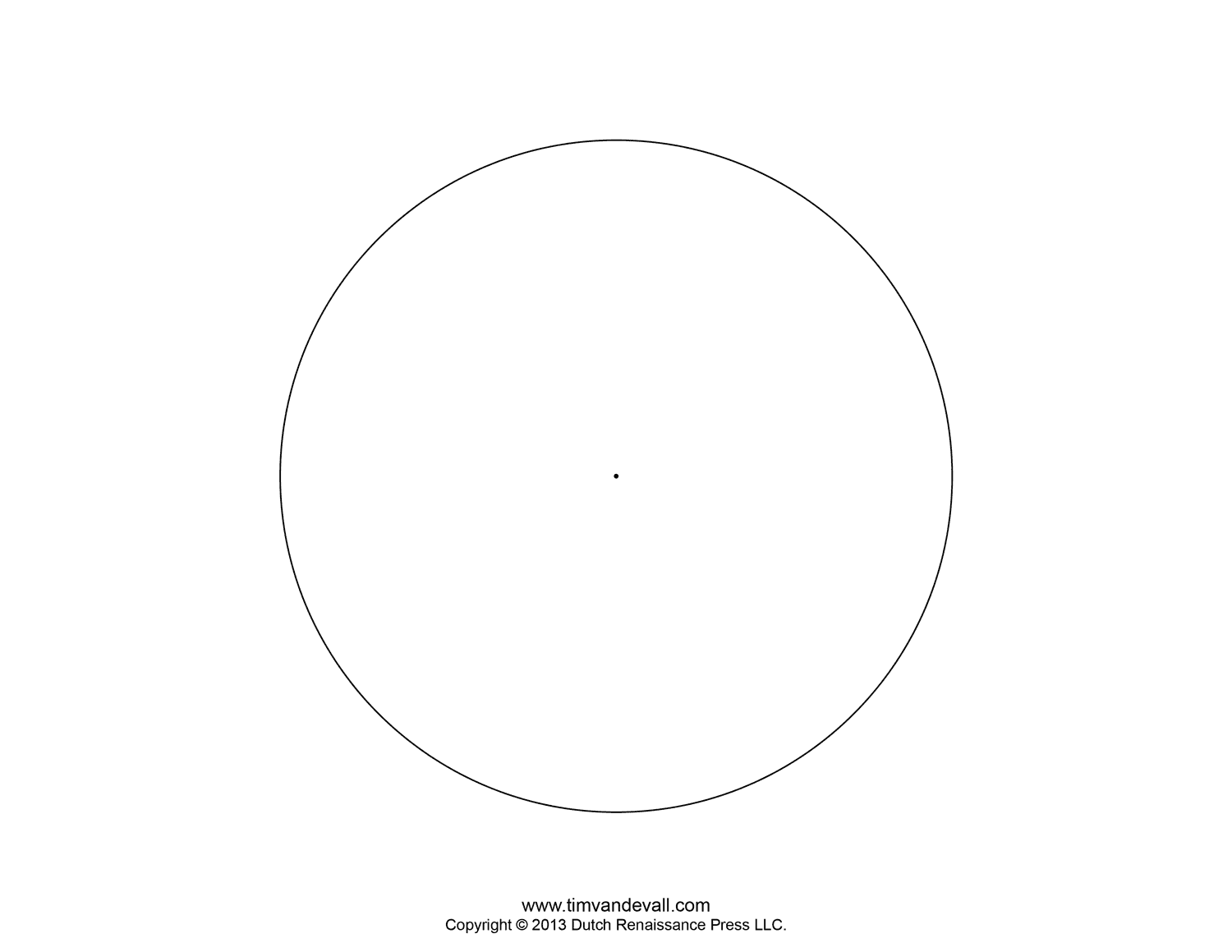
7) Draw 2 chords on the circle which cross each other. Label the intersection of the chords J, and label all four points of intersection between the chords and the circle.

8) Shade one of the angles between the chords. Measure it. m\_\_\_\_\_\_ = \_\_\_\_\_\_\_

9) Measure the arcs intercepted by the shaded angle and the arc exactly opposite that one.

m\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_ m\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_

10) Confirm that the angle between the chords equals half the sum of the two intercepted arcs.



J **∙**